Glossary

acclimation -	adaptations that occur within the body when exposed to a new environment.
aerobic capacity -	maximal amount of aerobic activity that can be done
aerobic energy system -	process of making energy (ATP) that requires oxygen.
amenorrhea -	the cessation of menstruation not due to pregnancy or menopause; can be seen in women athletes whose nutritional intake is not adequate; one component of the female athlete triad.
anaerobic energy system -	process of making energy (ATP) without using oxygen.
antioxidants -	compounds that prevent breakdown (oxidation) of substances in the body; nutrients such as Vitamin E and C have antioxidant properties.
basal metabolic rate -	the amount of energy (kcals) required to maintain life when the body at rest (BMR).
body composition -	a description of the amount of body weight that is lean body mass (muscle, bones) and the amount of body weight that is fat.
body mass index (BMI) -	an index that looks at weight in relation to height.
Calorie -	a measure of energy used to describe the energy consumed in foods and expended through physical activity; Calorie with a capital “C” is the same as kilocalorie (kcal).
carbohydrates (CHO) -	a macronutrient that supplies 4 kcals per gram; primary nutrient found in the grain, vegetable, and fruit food groups of the Food Guide Pyramid.
carbohydrate loading-	nutritional training method used by endurance athletes to increase the amount of glycogen stores in their muscles before a competition.
cardiorespiratory fitness -	ability of the heart, lungs, and blood vessels to deliver oxygen-rich blood to and remove waste products from the exercising muscles; the more trained the person, the higher the cardiorespiratory capacity; see aerobic capacity.
cholesterol -	a substance made by the body that serves as a base for hormones such as estrogen and testosterone, is a part of all cells, and is consumed in the diet by eating animal products.
dehydration -	a depletion of bodily fluids that occurs when not enough fluids are drunk to replace those lost through breathing, urination, and sweating.
detraining -	a loss of training adaptations that occurs when training stops; can be avoided, stopped or reversed through physical training.
electrolytes -	minerals in the body that help regulate fluid balance, are part of nerve conduction, and other essential bodily

	functions; examples include sodium, potassium, and chloride.
energy balance -	net metabolism balance of the total kcals eaten minus the total kcals expended through basal metabolism and physical activity.
ergogenic agent -	nutritional supplement taken with the purpose to enhance physical performance; examples include creatine, ginseng, caffeine and DHEA. many claim to improve performance but few have been demonstrated to be beneficial; may have health risks associated with long-term use.
ergolytic agent -	supplement taken with the purpose to enhance physical performance but actually decreases performance; many have health risks associated with long-term use; examples include alcohol and nicotine.
fat -	a macronutrient that supplies 9 kcals per gram; primary nutrient found in oils and butter; placed at the top of the Food Guide Pyramid.
female athlete triad -	cessation of menstrual cycles, loss of bone, and eating disorders seen in some women who participate in strenuous physical activity.
FITT Principle -	combination of four training factors (frequency, intensity, time, and type) that determine how an individual adapts to physical training.
flexibility -	the range of motion around a joint.
fluid balance -	net amount of fluid consumed minus the fluid lost through breathing, urine, and sweat.
glucose -	a simple CHO that serves as the main fuel to make energy (ATP) in the body.
glycogen -	a storage form of glucose found in muscles and liver.
heart rate (HR) -	the number of heart beats per minute.
kilocalorie (kcal) -	a measure of energy used to describe the energy consumed in foods and expended through physical activity.
kilogram (kg) -	metric measurement for weight; 1 kg = 2.2 pound (lbs).
lactic acid (lactate) -	a by-product of the anaerobic energy system.
ligament -	connective tissue that holds one bone to another bone.
macronutrient -	a nutrient that supplies kcals for energy metabolism; the three macronutrients are carbohydrate, protein, and fat.
metabolism -	chemical and physical processes that are required to maintain life.
METs -	metabolic equivalents; arbitrary unit of work in relation to rest; e.g., rest is 1MET, so if you exercise at 5METs you are expending 5 times the kcals you do at rest.
micronutrients -	nutrients that are needed in small amounts to aid in metabolism and other important bodily functions.

	micronutrients do not supply any kcals; the two classes are vitamins and minerals.
minerals -	class of micronutrient; examples of minerals are calcium, sodium, and potassium.
muscle endurance -	the ability of a muscle or muscle group to generate a less than maximal force over a period of time.
muscle strength -	the maximum force generated by a muscle or muscle group.
nutritional supplement-	a substance taken in addition to eating food to increase the amount of a particular nutrient or group of nutrients in the body. Some substances may also be taken in an attempt to improve physical performance.
osteoporosis -	a common bone disorder that is characterized by low bone density and weakened bones; people with osteoporosis have a greater risk of fracturing bones.
overhydration -	a gain of body water that occurs when too much plain water is drunk in an attempt to replace the fluid and electrolytes lost through sweating during strenuous and prolonged exercise; can be avoided by drinking a carbohydrate-electrolyte drink, such as a sports beverage, or eating a snack when exercising for more than 60 minutes.
overload -	placing greater-than-normal physical demands on the body with the intent of improving physical fitness and capability; this overload should be progressively increased.
overtraining syndrome -	a set of symptoms that are experienced when too much or too intense a physical activity is performed without adequate rest.
oxygen consumption -	measure of the intensity of a physical activity. Maximal oxygen consumption (VO_{2max}) is a measure of the maximum work that an individual can perform both aerobically and anaerobically.
physical activity -	movement of the muscles that results in energy expenditure.
physical fitness -	the ability to perform physical activity.
pounds (lbs) -	measure for weight; 2.2 lbs = 1 kilograms (kg).
protein -	a macronutrient that supplies 4 kcals per gram; primary nutrient found in the dairy and meat / meat substitute food groups of the Food Guide Pyramid.
repetition -	one lifting and lowering of a weight or resistance during muscle training; often abbreviated “rep.”
set -	a series of repetitions performed one after another without a rest period.
SMART goals -	defined goals that are specific, measurable, action-oriented, realistic, and timed.
specificity of training -	a principle which describes that training adaptations are optimized in a specific physical activity when that activity is performed in training sessions.

target heart rate zone-	a recommended heart rate range specific to each person, dependent on age and fitness level, that is within a safe intensity level to exercise.
tendon -	connective tissue that holds a muscle to a bone.
Valsalva maneuver -	when an individual holds his breath and bears down. This is impedes blood flow, increases blood pressure, and can be dangerous.
vitamins -	class of micronutrient; can be fat or water soluble; do not provide energy but are needed in many important functions; excessive intakes can be toxic.
waist-hip-ratio (WHR)-	a ratio of the waist circumferences (in inches) to the hip circumference (in inches); used to describe the distribution of body fat.
WATT -	measurement of work that describes the amount of kcals expended in a given time period; i.e., kcals/min.